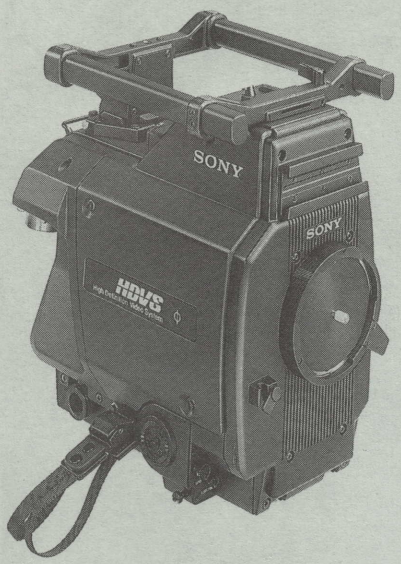
SONY

HD COLOR CAMERA

HDC-300



HDVS

OPERATION MANUAL

1st Edition

Serial No. 10001 and Higher

Warning — This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Important-To insure that the complete system (including this peripheral) is capable of complying with the FCC requirements, it is recommended that the user make sure that the individual equipment of the complete system has a label with one of the following statements.

"This equipment has been tested with a Class A Computing Device and has been found to comply with Part 15 of FCC Rules."

-or-

"This equipment complies with the requirements in Part 15 of FCC Rules for a Class A Computing Device."

-or equivalent.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a computing device pursuant to Subpart J of Part 15 of FCC rules.

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Functions of Parts

Mechanism and Connectors

CCU connector

Measure hook

Focal plane index

Lens cable clamp

LENS
Lens connector

LENS POWER
Large lens power supply connector

Measure hook

Cable clamp

Cap lug (camera cable dust tight cap)

VF1, VF2
VF (viewfinder) connector

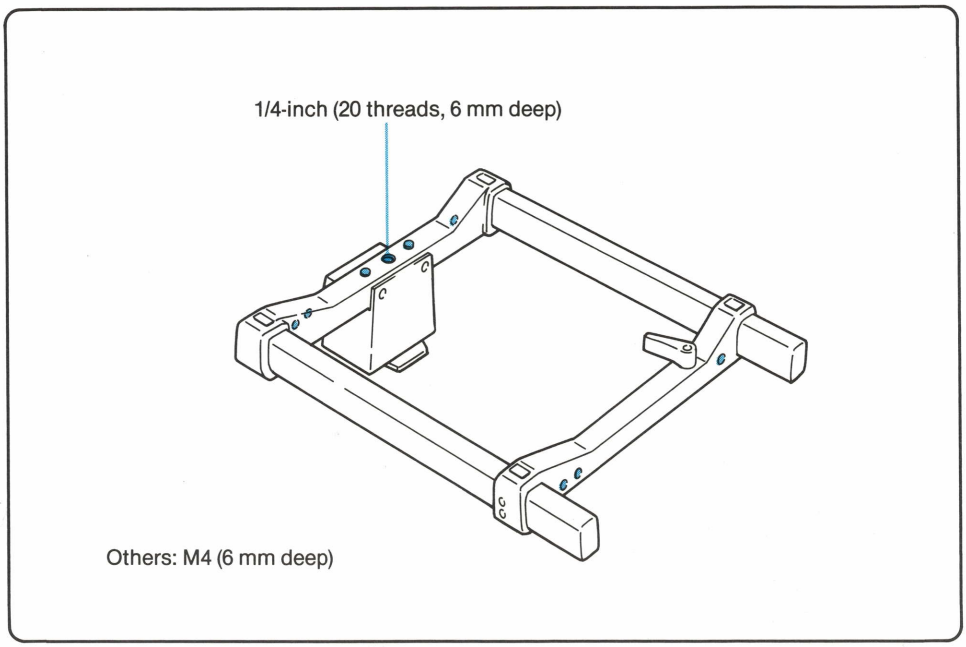
VF POWER
Supply power connector for the HDVF-75 7-inch viewfinder

MONITOR
VIDEO OUT connector

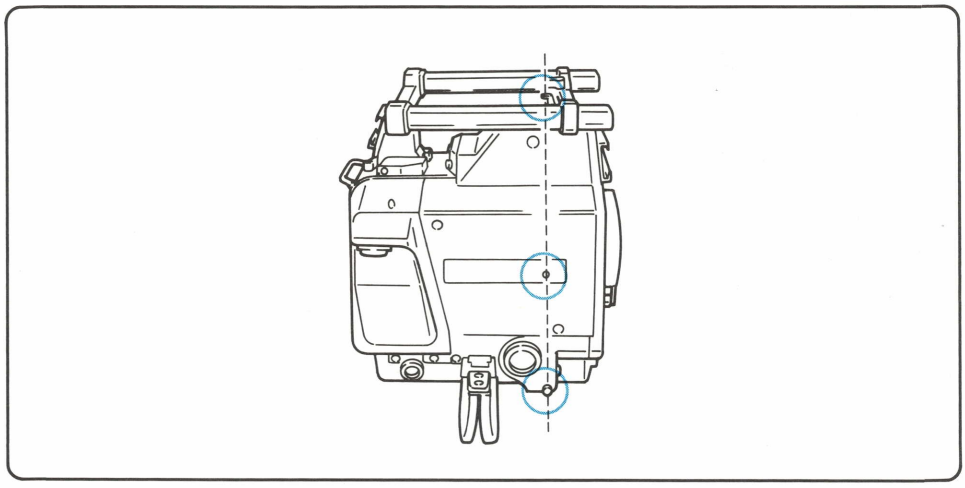
REMOTE
Connector for the remote commander planned to be marketed shortly

INCOM1, INCOM2
Intercom headset jacks 1 and 2
1: Engineering line
2: In accordance with the internal switch settings (See page 17.)
These jacks can be used as a double jack.

Screw hole
(provided for user option)

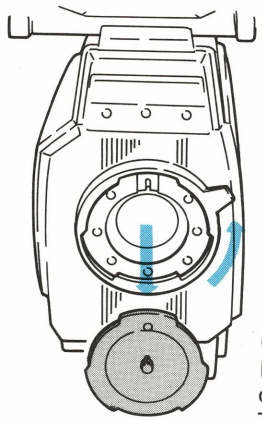


Location of measure hook and focal plane index



Mounting the lens

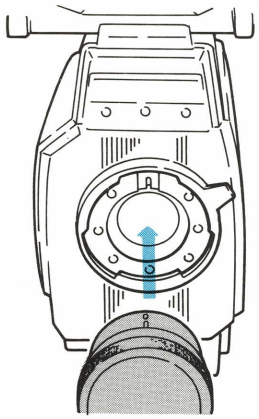
1 Remove the cap.



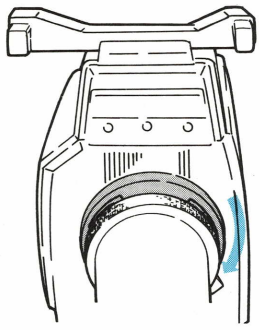
Turn fully counterclockwise

Cap
Replace the cap when leaving the camera without the lens.
The installation procedure is the same as that for the lens.

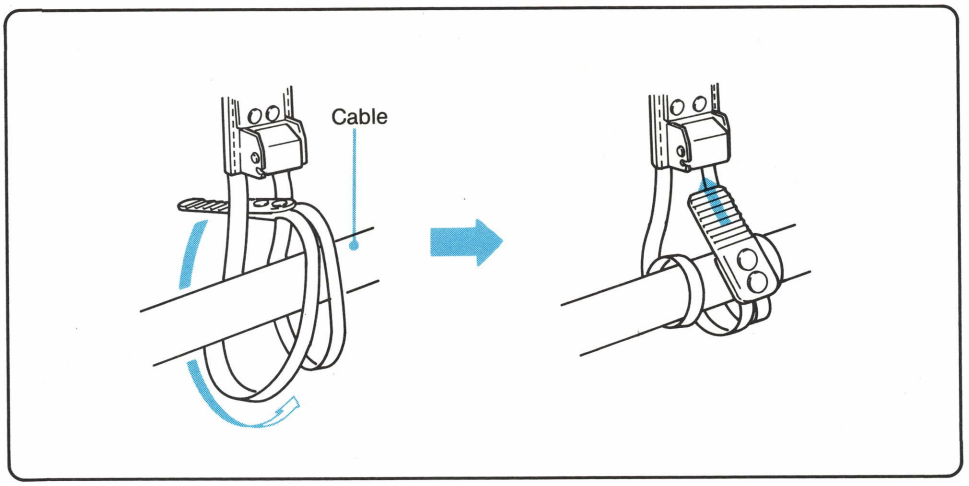
2 Align the lugs with the breaches and insert.



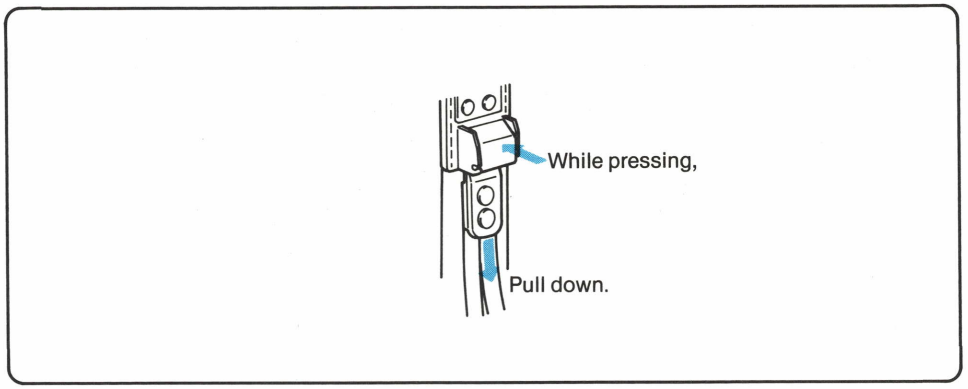
3 Tighten.



Using the cable clamp

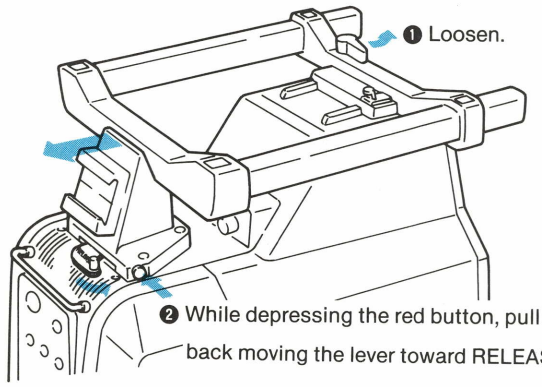


Removing the cable



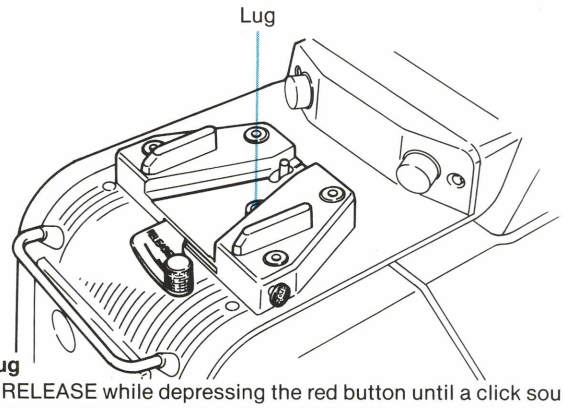
Removing/attaching the carry handle

Removing the carry handle



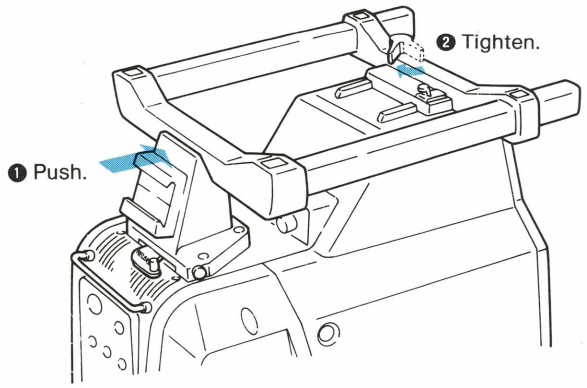
Installation

1

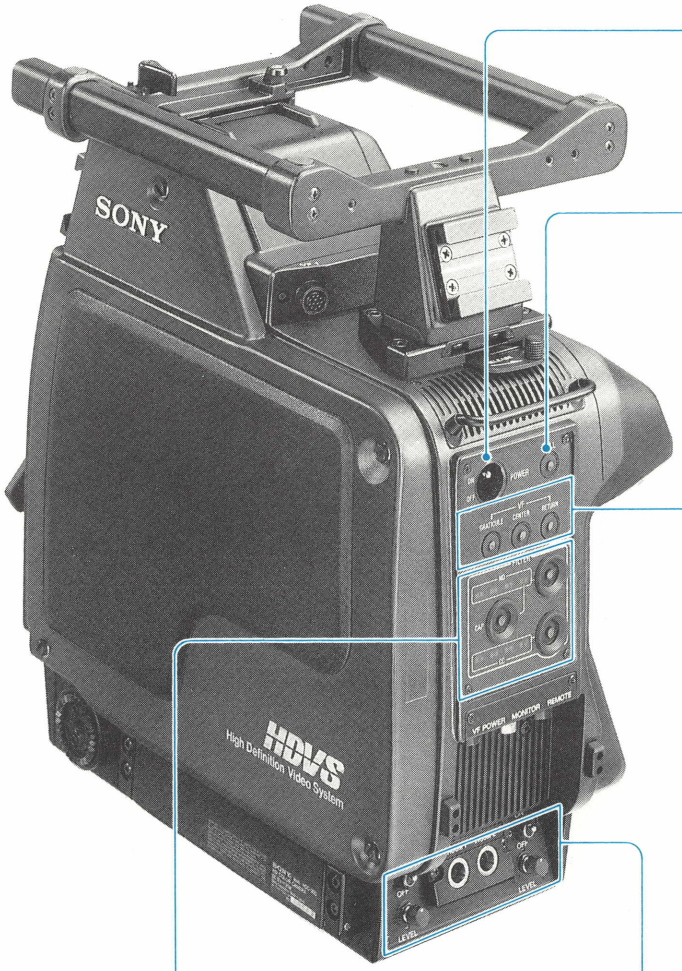


When there is a lug
Move the lever to RELEASE while depressing the red button until a click sound is heard.

2



Operating Unit



POWER
Main power switch
Refer to the HDCO-300 operation manual for system startup.

CALL
The red tally lamp on the HDCO-300 panel lights while depressing this button.
Pressing this button while the camera tally lamp is lit will switch it off.

VF

GRATICULE
Press this to display the aspect ratio 4:3 and other CCU (HDCS-300) set graticules on the viewfinder screen.
Press again to cancel.

CENTER
Press this to display the center line indicator on the viewfinder screen.
Press again to cancel.

RETURN
Keep this depressed to display a return video.

FILTER

ND
Press to change the filter. (1 → 2 → 3 → 4 → 1.....)

1	CLEAR	Completely clear
2	1/4 ND	Reduces quantity of light by 1/4
3	1/16 ND	Reduces quantity of light by 1/16
4	CAP	Completely closed (capped)

CAP
Press to cap the lens.

CC
Press to change the filter. (A → B → C → D → A.....)

A	3200K	Used when the color temperature of incoming light is 3200K
B	4300K	Used when the color temperature of incoming light is 4300K
C	6300K	Used when the color temperature of incoming light is 6300K
D	EFFECT	Special effects cross filter

MIC
Implements the intercom headset microphone.

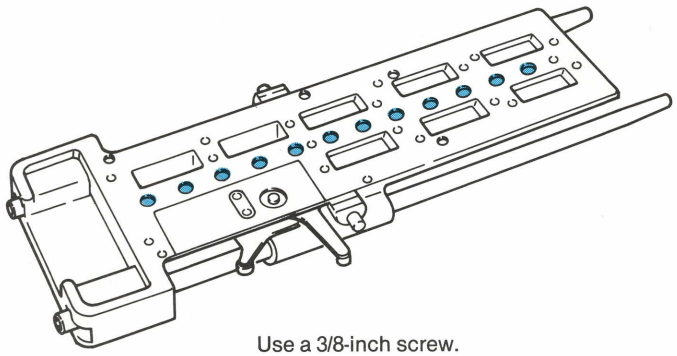
LEVEL
Adjusts the intercom voice receiving level.

Assembly

Using a Portable Lens

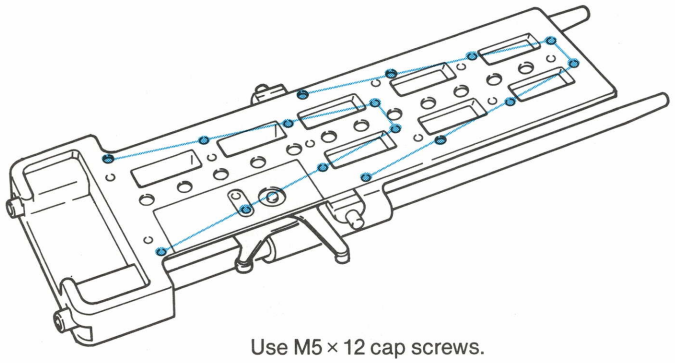
1 **Mount the V-wedge on the tripod attachment.**

Vinten type



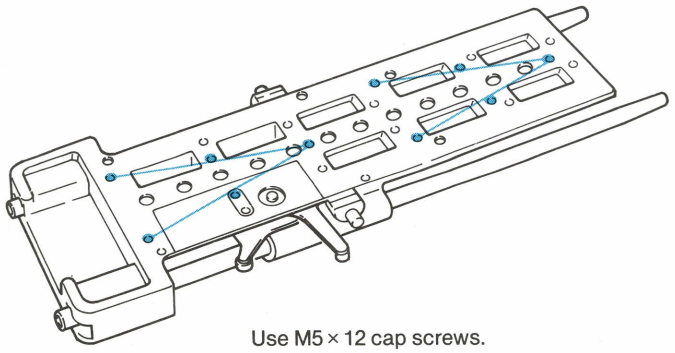
Use a 3/8-inch screw.

Shotoku type (TE-02/06)



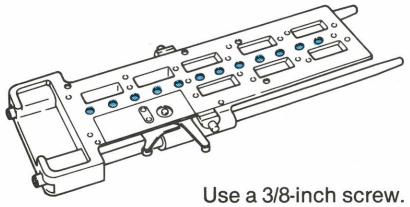
Use M5 × 12 cap screws.

Shotoku type (TE-05)



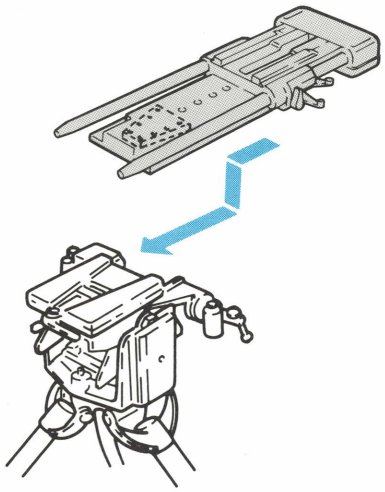
Use M5 × 12 cap screws.

When not using the V-wedge
The tripod attachment can be mounted on the tripod without the V-wedge.



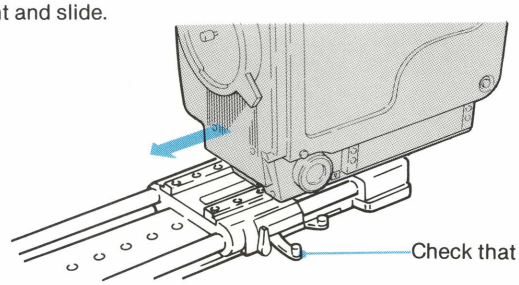
Use a 3/8-inch screw.

2 Mount the tripod attachment on the tripod.

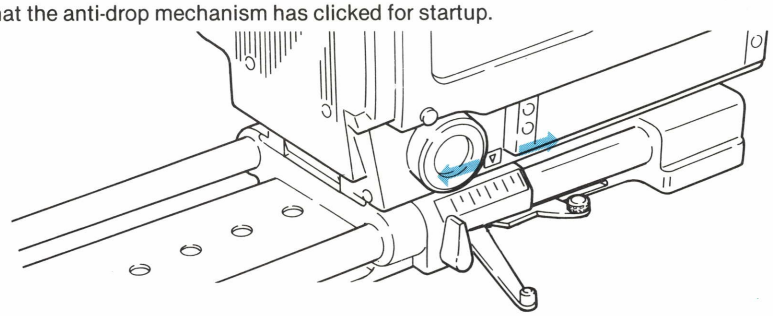


3 Mount the camera head.

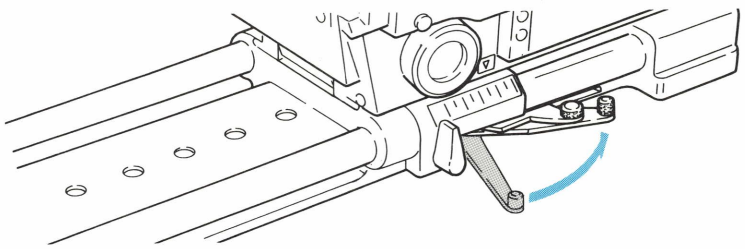
❶ Place the front and slide.



❷ Position the camera head after checking that the ▽ mark is aligned with the scale range or that the anti-drop mechanism has clicked for startup.

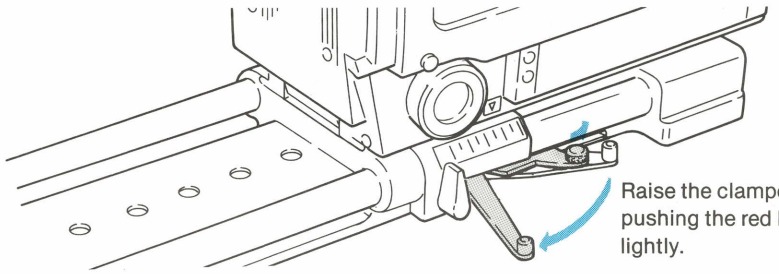


❸ Lock.



4 Mount the lens.

Releasing the camera head lock

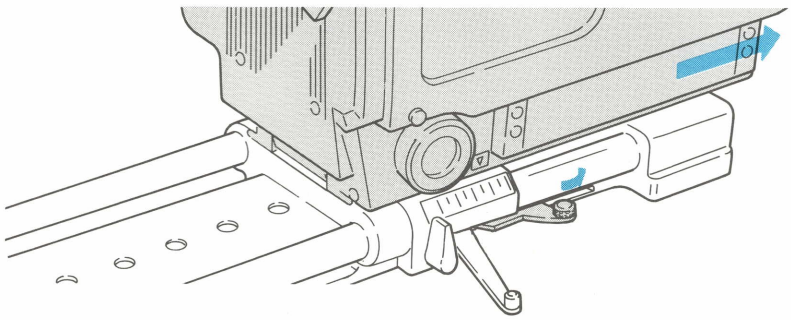


The camera head will remain seated as long as the anti-drop mechanism is still functioning.

Removing the camera head

1 **Check that the clamper is raised.**

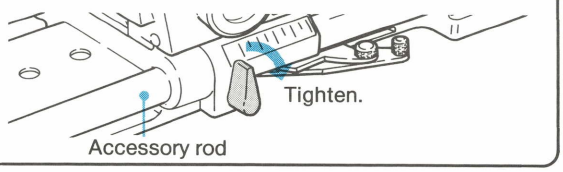
2 **Retract the camera head while fully depressing the red lever (or releasing the anti-drop mechanism).**



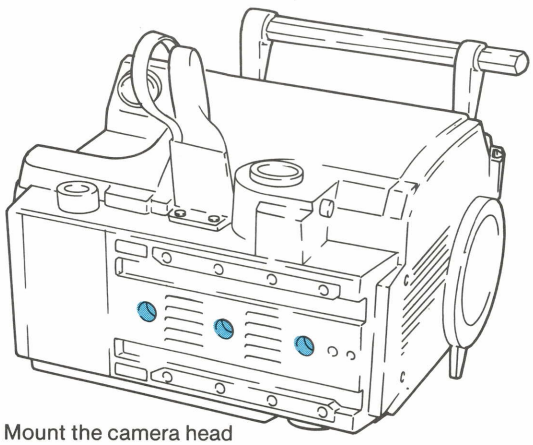
Note

When the camera head is fully recessed (or in direct contact with the anti-drop mechanism lug), the anti-drop mechanism cannot be released. Move the camera head slightly forward to release.

Tightening the accessory rod



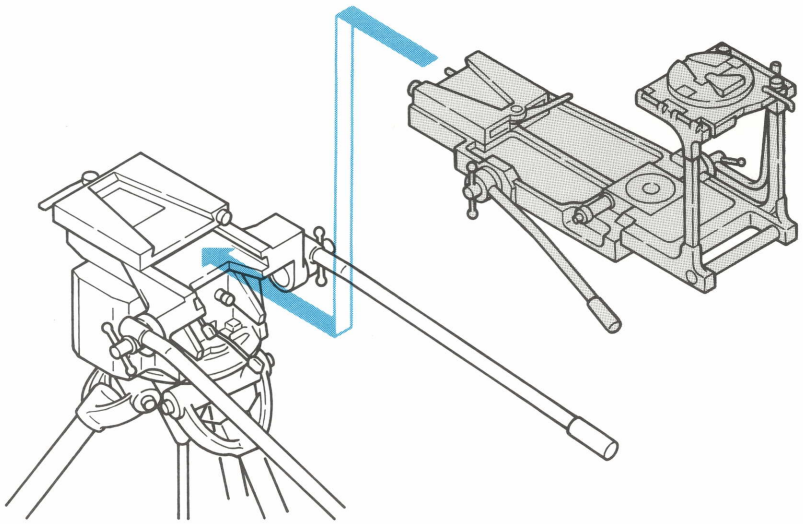
When not using the tripod attachment



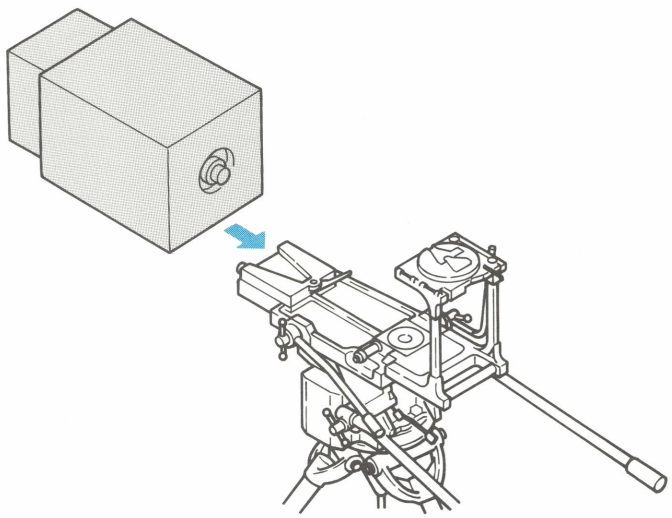
Mount the camera head directly on the tripod using a 3/8-inch screw.

Using a Large Lens

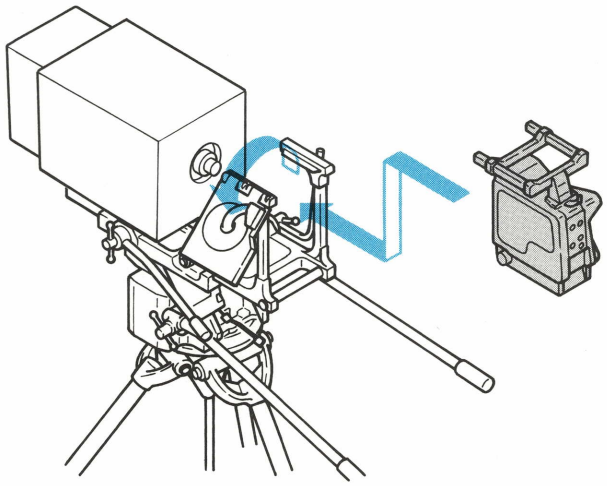
1 Mount the lens support on the tripod.



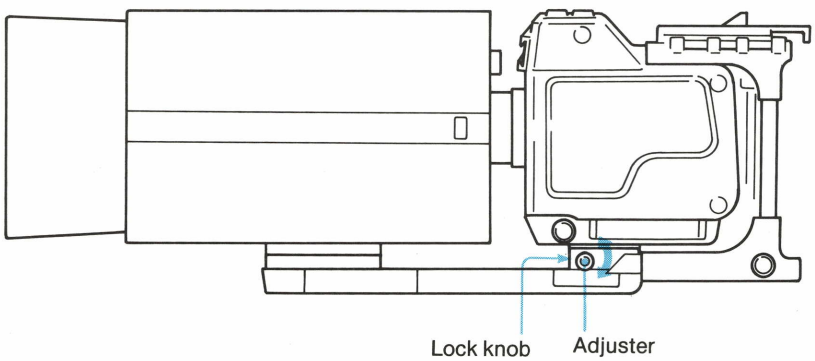
2 Mount the lens on the lens support.



3 Open the top plate of the lens support and place the camera head on the lens support.



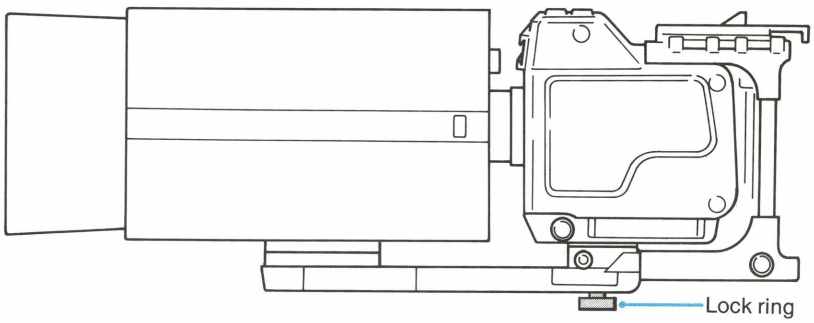
4 Mount the camera head on the lens while adjusting the height.



Once the camera head has been locked in place with the LOCK knob following adjustment, it is no longer necessary to repeat adjustments each time the head is mounted.

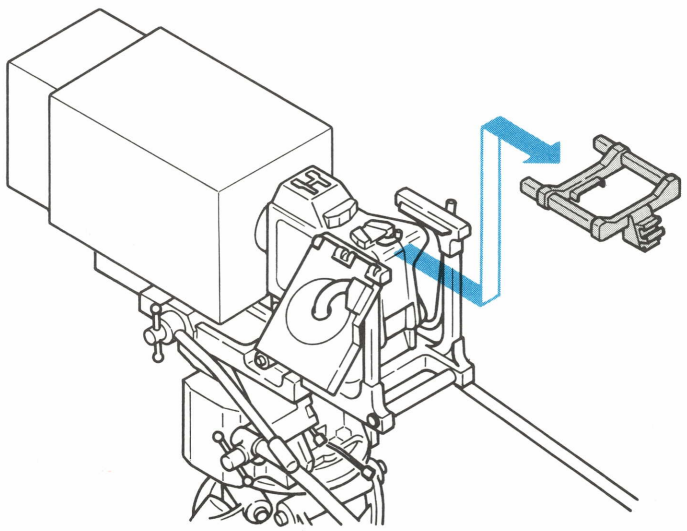
The procedure may differ depending on the lens used.
Refer to the operation manual of your lens.

5 Attach the lens support screw to the camera head bottom and tighten it to secure the camera head.

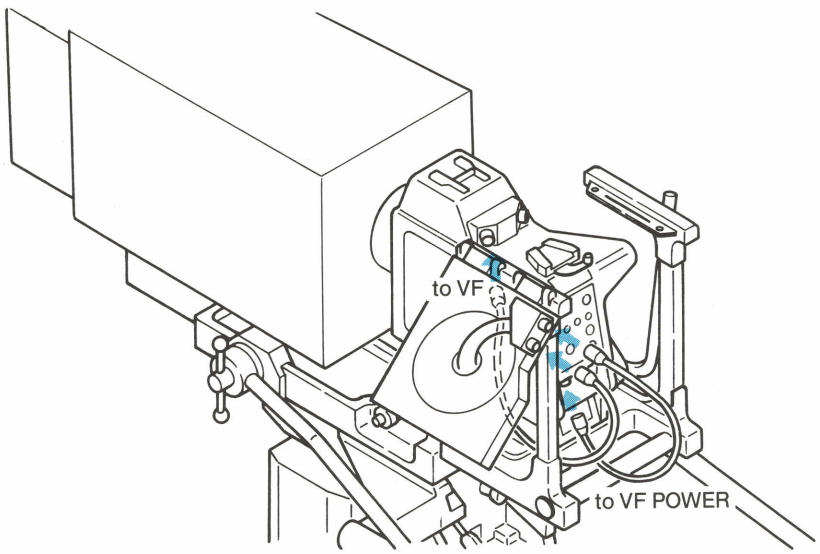


The procedure may differ depending on the lens used.
Refer to the operation manual of your lens.

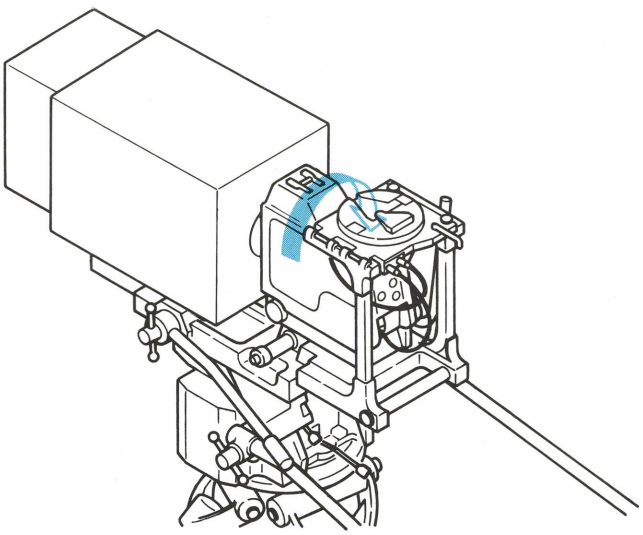
6 Remove the camera head carry handle. (Refer to page 6.)



7 Connect the HDVF-75 7-inch viewfinder cables.



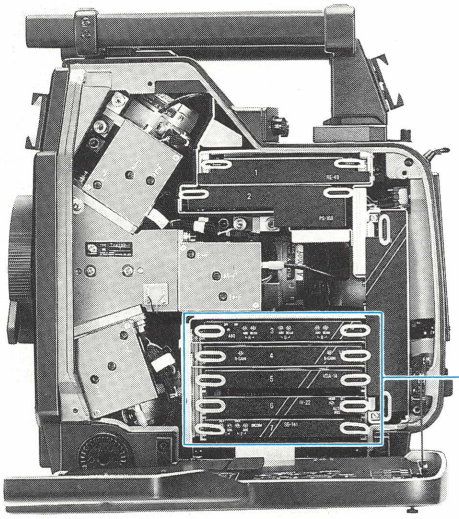
8 Close the top plate.

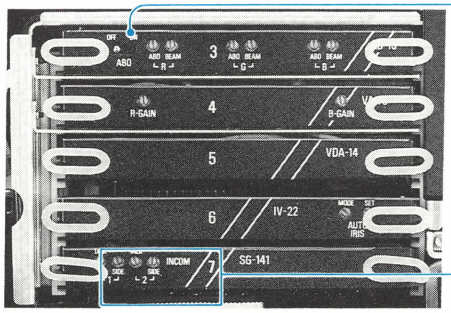


For details on installation of the HDVF-75, refer to its operation and maintenance manual.

Internal Setting and Adjustment

Main Unit



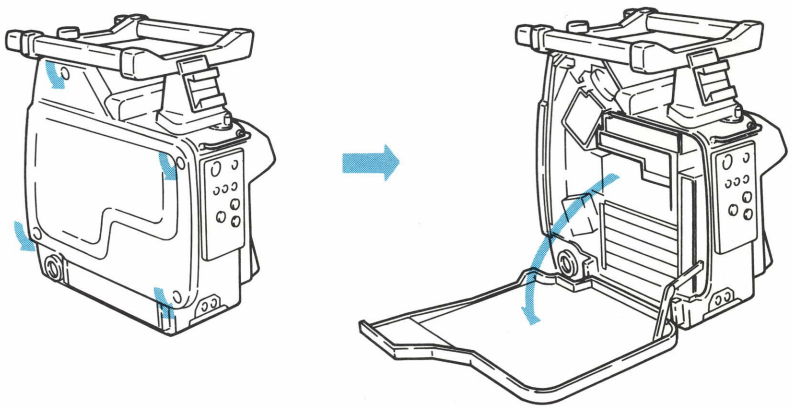


ABO	Implements the ABO (auto beam optimizer).

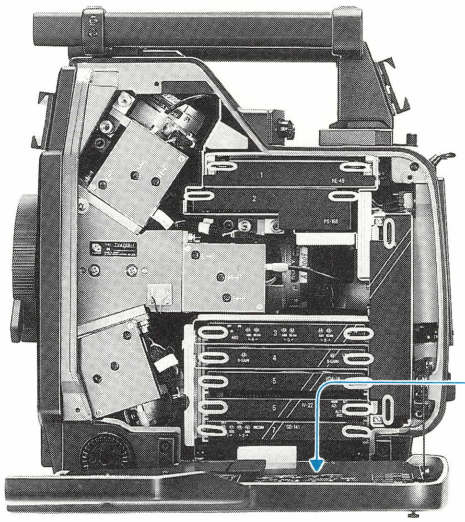
TALK (INCOM 1/2)	Adjusts the sound volume of the transmitted voice.
SIDE (INCOM 1/2)	Adjusts the sound volume of one's own voice heard from the headset.

Other adjustments should be made by Sony servicemen.

Opening the side plate

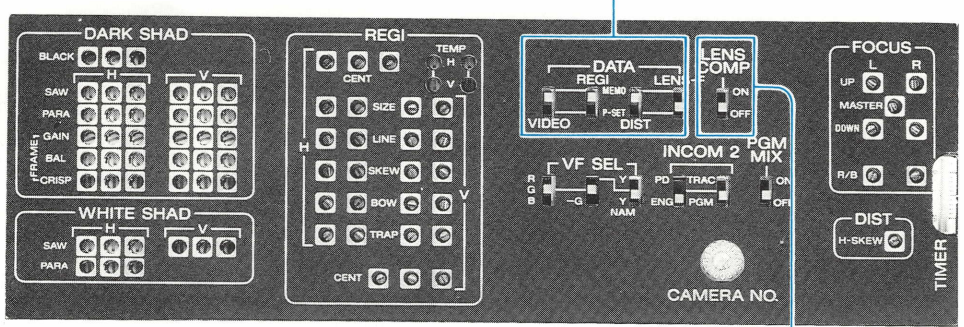


Side Plate Rear



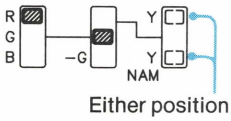
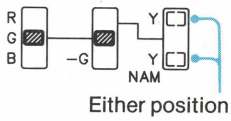
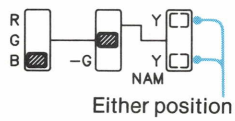
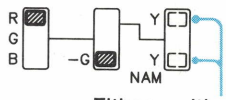
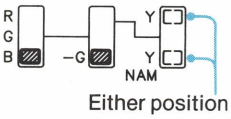
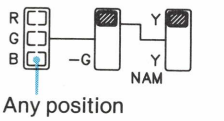
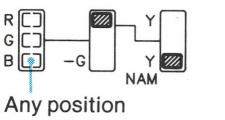
DATA	VIDEO	Video system control data
	REGI (registration)	Registration control data
	DIST (distortion)	Distortion correction data
	LENS-F (file)	Lens file data

MEMO (memory)	Implements correction data stored in memory.
P-SET (preset)	Correction data not implemented.

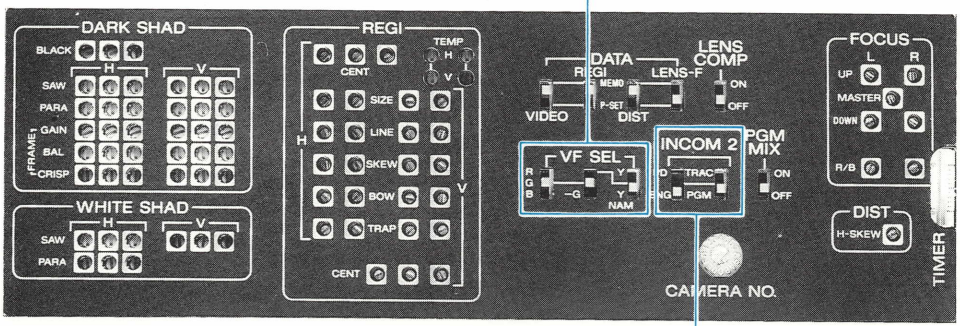


LENS COMP	Implements lens distortion and color multiplying factor correction data.

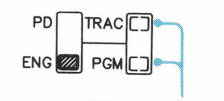
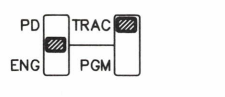
VF SEL (select)	Changes the viewfinder screen.

R signal	G signal	B signal	R-G signal
 Either position	 Either position	 Either position	 Either position
B-G signal	**Y signal**	**NAM-Y signal**	
 Either position	 Any position	 Any position	

Select the Y signal screen by closing the side plate. This can be done independently of the current position except when the NAM-Y signal has been set.



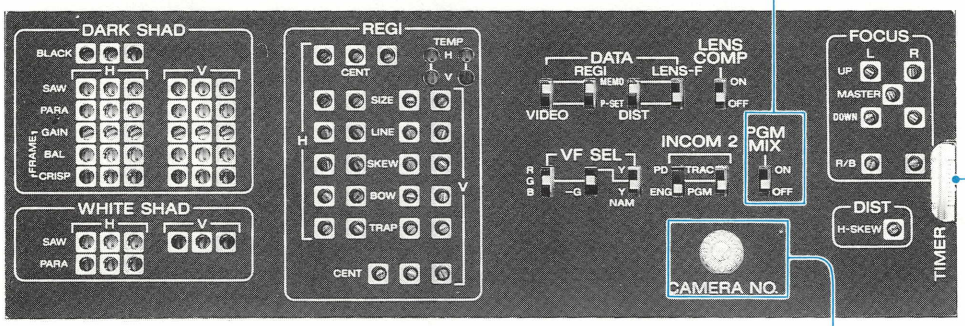
INCOM 2	Determines the function of the headset connected to the INCOM 2 jack.

Producer line	Engineering line	Tracker (communicable with 1 and 2)	Program audio
Either position	 Either position		

Abbreviations

PD	producer
ENG	engineering
TRAC	tracker
PGM	program

PGM MIX	Implements program audio mix with INCOMs 1 and 2.



CAMERA NO.	Sets the camera ID number (0 to 15), which is indicated on the HDCO-300 panel's EL display panel. (However, "0" is reserved for adjustment purpose and cannot be used by the user.)
TIMER	Progressive time in use is displayed. (Approx. 2,000 hours in full scale)

Other adjustments should be made by Sony servicemen.

Notes on Usage

Installing the HD Camera System

- Install in a location as dry and well-ventilated as possible.
- Allow adequate air circulation to prevent internal heat buildup. Do not place the unit on an uneven surface (rug, blanket, etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near a heat source such as a radiator or air duct, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position only.
- Keep the unit away from equipment with strong magnetic fields.

Using the HDC-300

Warming up

We recommend the camera tube be warmed up for thirty minutes prior to pressing the CHU POWER button on the HDCO-300 to secure stable operation and prevent burning-in.

Avoid burning-in of the pickup tubes.

If a strong, bright light, such as direct sunlight enters the pickup tubes, this may cause image burning. To avoid this:

- Before turning the power on, be sure to check no light enters the pickup tubes.
- Do not point the camera directly at the sun or a bright light source.
- Avoid prolonged shooting of a lamp or brightly lit object. If this is absolutely necessary, use an ND filter or as small an aperture as possible.
- When the camera is not being used, prevent light from entering the pickup tubes by:
  - — Attaching the lens cap
  - — Closing the shutter
  - — Selecting the ND 4 filter (capped) position
  - — Attaching the lens mount cap to the lens mount when the lens is detached for storage

Operating and storage locations

Do not operate or store the camera in a location:

- Extremely hot or humid. (The operating temperature range is 0°C to + 40°C, or 32°F to 104°F)
- Subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Subject to a strong magnetic field.

Maintain the camera in a horizontal position and allow adequate air circulation.

Specifications

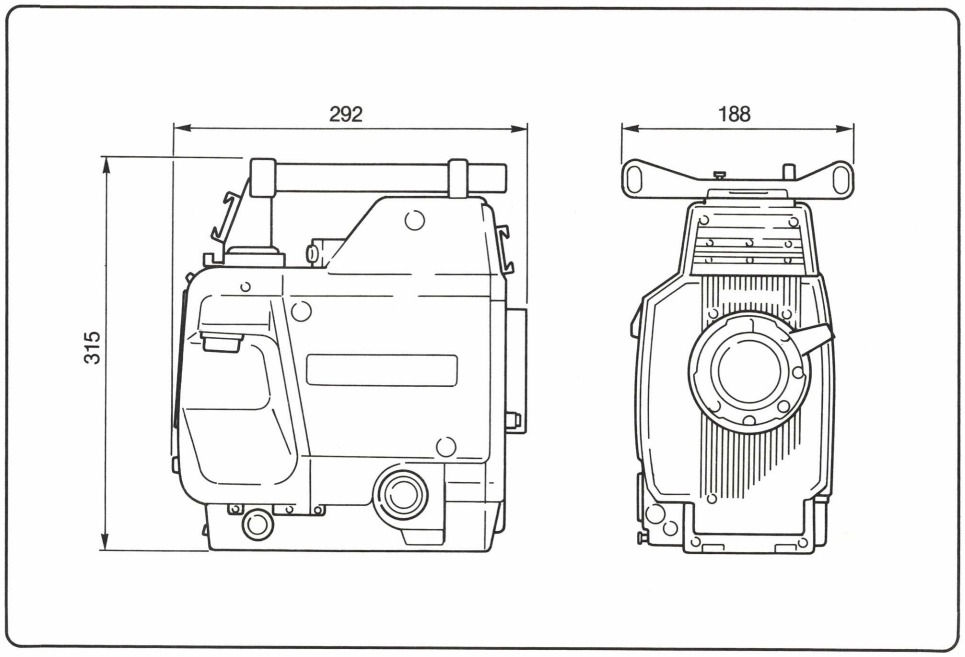
General Specifications for the HDVS Camera System

Sensitivity	2000 lux (F = 4.7, 3200K, reflection 90%)
S/N	44 dB (Y signal, 100 kHz to 30 MHz)
Registration error	Zone I: 0.025% Zone II: 0.05% Zone III: 0.05%
Resolution	1,200 lines (center)
Horizontal frequency	33.750 kHz 1,125 lines/frame
Vertical frequency	60 Hz 2:1 interlace
Power requirements	AC 100 V/120 V/220 V/240 V±10%, selectable, 50/60 Hz
Power consumption	400 VA (Total of HDC-300, HDCS-300 and HDCO-300; cable length 100 m, or 330 feet, using the HDVF-15 and a portable zoom lens)

HDC-300 Specifications

Camera tubes system	1-inch static focus, static deflection Saticon RGB 3-tube system
Spectral system	F1.2 high-index prism system with built-in quartz filter
Built-in filters	Color temperature conversion filters A: 3200K B: 4300K C: 6300K D: Cross filter ND filters 1: Clear 2: 1/4 ND 3: 1/16 ND 4: Closed (cap)
Lens mount	Bayonet mount
Scanning system	1,125 lines, 2:1 interlace
Horizontal frequency	33.750 kHz
Vertical frequency	60 Hz
Connectors	
Input/output	CCU connection (11-pin) accepting HDCC camera cable REMOTE (12-pin) LENS (12-pin)
Output	LENS POWER (4-pin) VF1, VF2 (12-pin) VF POWER (4-pin) MONITOR (BNC type): 1.0 Vp-p, 75 ohms, unbalanced, tri-level bipolar synchronization
Intercom	Intercom headset jacks INCOM 1: Engineering line INCOM 2: Producer line Program audio can be mixed Intercom jack/XLR type connector (selectable)

Power requirements	DC 17 V
Power consumption	40 W
Warm-up time	Approx. 30 minutes
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	−20°C to + 40°C (−4°F to + 104°F)
Weight	Approx. 8.9 kg (19 lb 10 oz)
Dimensions	188 × 315 × 292 mm (w/h/d) (7 1/2 × 12 1/2 × 11 1/2 inches) including projecting parts and controls



Accessories

Handle (1)
Intercom panel assembly (1)
Tripod attachment (1)
HD chart (1)
Bias lamp (3)
Extension board (1)
Allen wrench (2 mm, 3 mm) (1 each)
Carrying case (1)
Operation manual (1)
Maintenance manual (1)

Design and specifications are subject to change without notice.

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3-734-210-01(1)

Sony Corporation

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